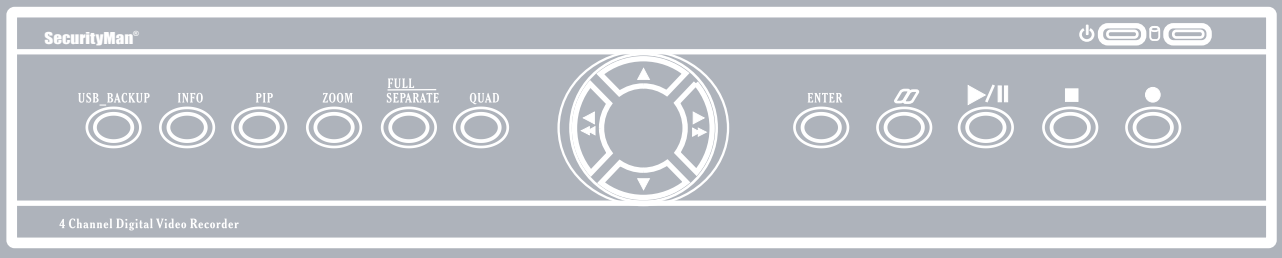
SecurityMan®

Network Edition

4CH Triplex Digital Video Recorder



User's Manual

NDVR-04

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Operation of this equipment in a residential area is likely to cause interference in which case the user at his or her own risk and expense will be required to correct the interference.

Declaration of Conformity
SecurityMan declares that the DVR-04 conforms to the following standards, in accordance with the provisions of the EC Directive 89/366/EEC: EN 55022 (CISPR 22:1985), Class A.

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This warranty is exclusive and is limited to DVR-04. This warranty shall not apply to products that have been subjected to abuse, misuse, abnormal electrical or environmental conditions, or any condition other than what can be considered normal use.

Warranty Disclaimers
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The exclusion of implied warranties is not permitted in some states and the exclusions specified herein may not apply to you. This warranty provides you with specific legal rights. There may be other rights that you have which vary from state to state.

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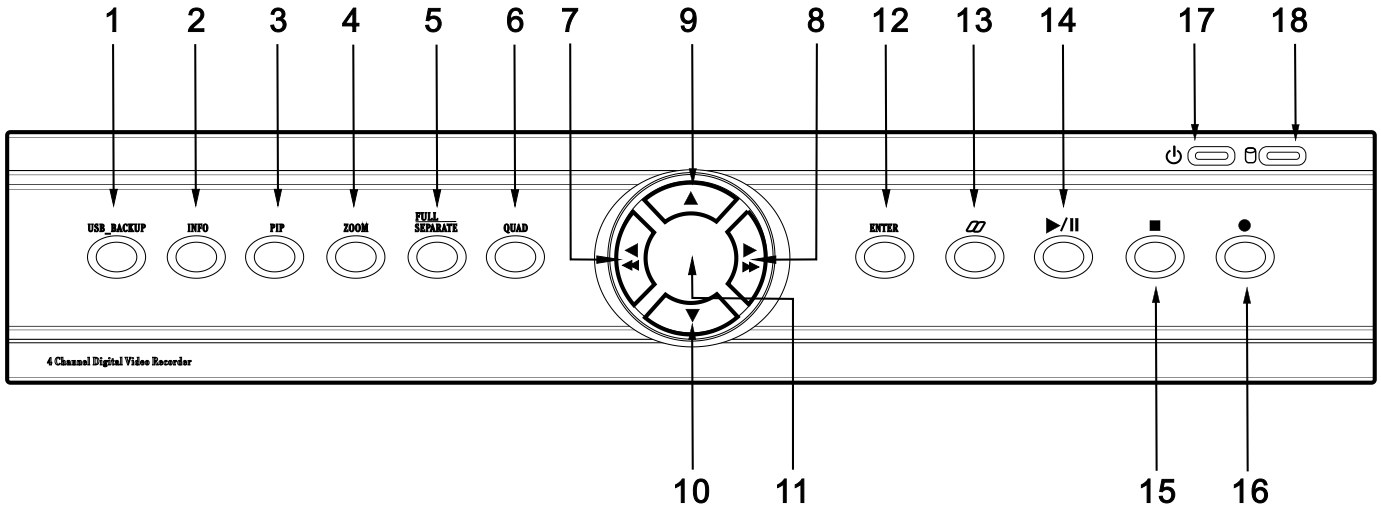
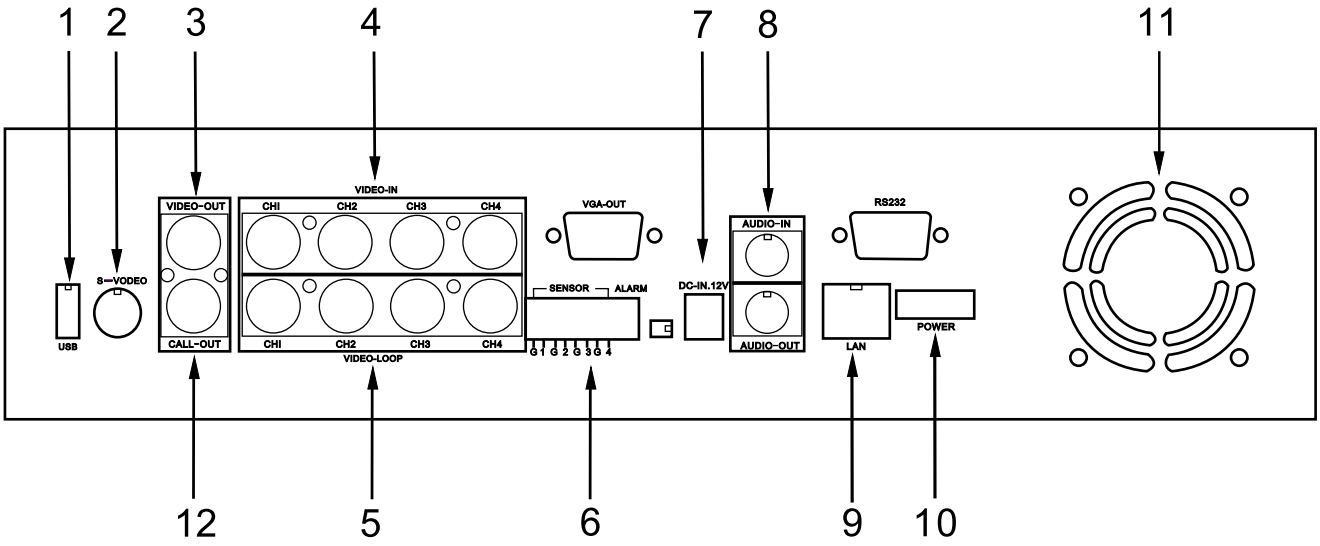
The Digital Video Recorder (DVR) is for recording video streams up to 4 channels all at the same time. It adopts the digital image compression technology to compress the video streams into digital signals and uses HDD for recording. The following operation guide explains how to operate and manage the DVR while the installation guide explains how to install the DVR and how to add HDD into the DVR.
Hope you will enjoy it, use it to protect your home, and eventually make your home safe.

Front Panel Key Function



1) USB_ BACKUP : Backup recorded data to USB memory via USB port on the rear of the DVR.
2) INFO : Display current setting information of the DVR; HDD information, software version, etc.
3) PIP : Picture in Picture
4) ZOOM : Zoom into the current active image.
5) FULL/SEPARATE : Full screen of CH1, CH2, CH3 & CH4.
   Press and hold for 3 seconds to activate 9 split screen.
6) QUAD : Display images in QUAD view.
   Press and hold for 3 seconds to activate auto dwell between cameras.
7) ◀◀ ◄ Rewind : Reverse playback
8) ▶▶ ► Forward: Fast Forward
9) ▲ Up: Browse up or choose between the three type of watermark during playback mode.
10) ▼ Down : Browse down
11) IR Remote Sensor
12) Enter: Select or confirm
13) Menu: Setup Mode, Menu
14) Playback/Pause
15) Stop: Stop playback.
16) Recording: Start or end recording.
17) Power on LED indicator: Solid Green
18) Recording LED indicator: Flashes Red on record.

Rear Panel Function



1) USB2.0: Flash Drive

2) S-Video(Y/C) video output connector

3) VIDEO-OUT(BNC VIDEO OUTPUT CONNECTOR)

4) VIDEO-IN (BNC CAMERA INPUT)

5) VIDEO-LOOP OUTPUT (CAMERA LOOP OUT)

6) 4 sensor inputs and one alarm output

7) DC-IN 12V, 4.2A, positive inside

8) Audio channel input x 1 and audio output x 1

9) LAN network port

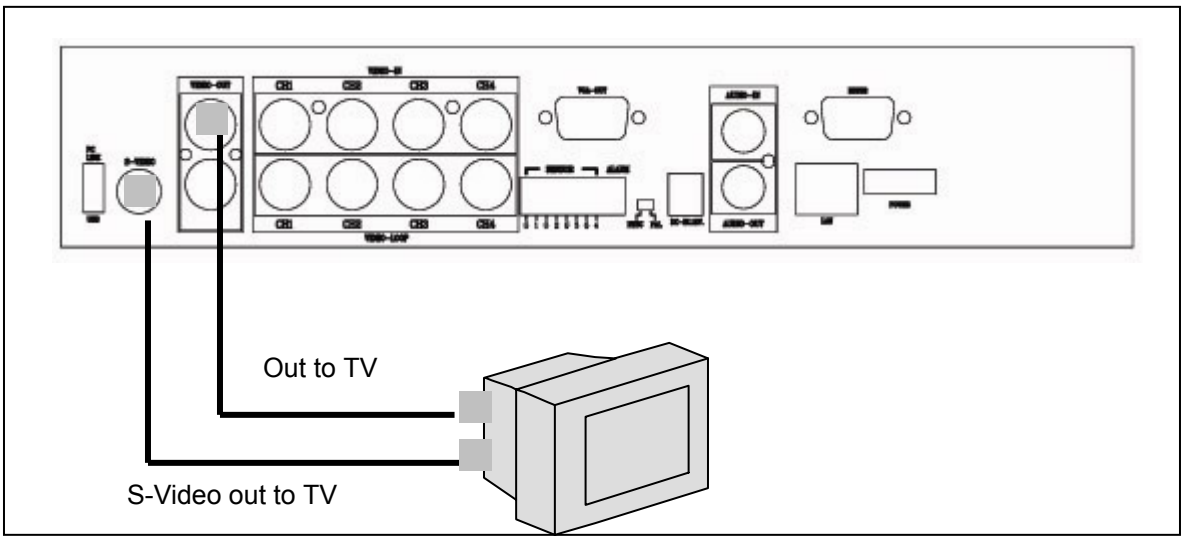
10) Power switch

11) NDVR FAN

12) CALL-OUT: Auto dwell video output to 2nd or son-monitor

Video Output connection to TV or monitor

Please connect the TV or monitor input source to the video-out located on the back of the DVR. This unit provide an S-Video and 2BNC output connectors. Video output are used primary for monitoring and toggle between full screen and quad screen display. The call out connector is used for a 2nd or a son-monitor output to display full screen single channel with auto sequencing mode, no quad view. The figure below illustrate the connection between the DVR and the monitor output.

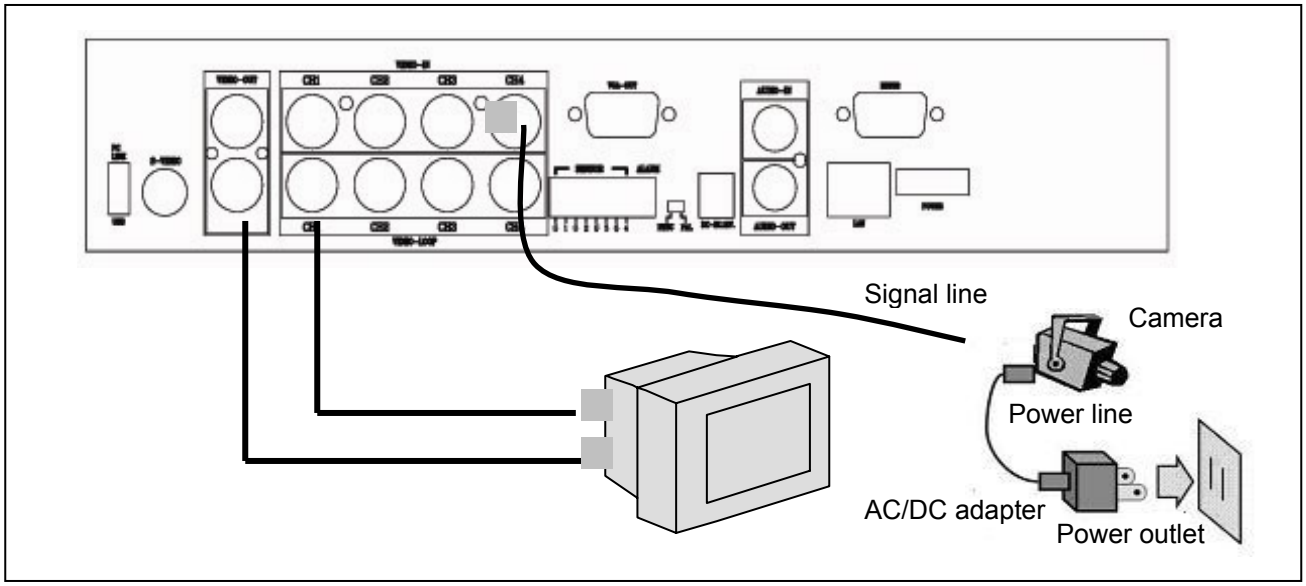


Video Input connection (Camera Input)

Please connect camera video cable to the DVR video input port. This unit provide 4 x BNC video input connectors port. The camera installation procedures are as following:

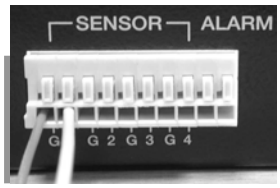
Connecting the camera video: connect the camera video cable to the DVR's VIDEO-IN.

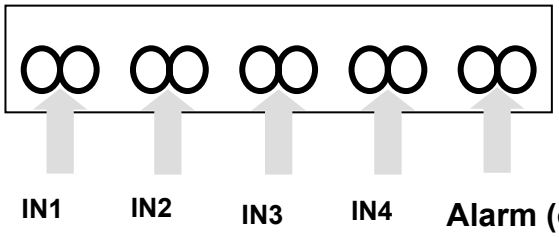
Connecting the camera power: connect camera's A/C adapter to the camera, and plug the adaptor into a power outlet. The complete connection illustration with a camera are shown in the figure below.



Sensor Installation

This unit contains 4 sensor inputs in which each sensor corresponds to the 4 channels. The sensor installation procedures are as follow. There are two simple step in installing the sensors.
connecting the sensor signal line: connect the sensor signal line to DVR. The sensor signal terminal is located on the rear panel of the DVR.
Then Connect the sensor jack to the sensor, and plug in the adaptor to an electrical outlet to power up sensor.



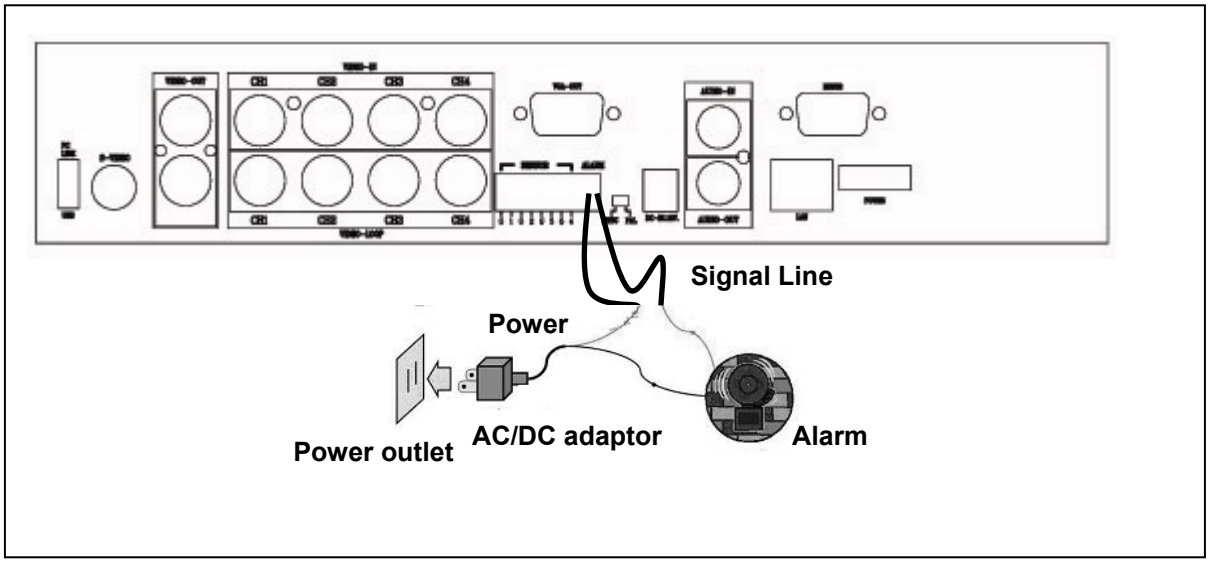


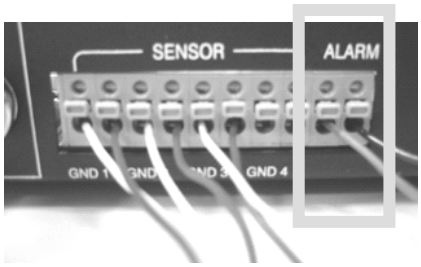
Note: Each sensor corresponds to each camera channel, for example, alarm input #1 will correspond to channel #1 and so on.

Alarm (output) Installation

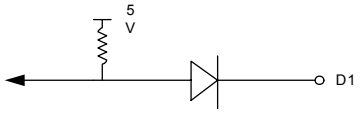
The unit provides 1 internal switch to sound the alarm when the sensor is activated. The switch is open at normal state a wiring diagram as shown below. When the alarm is activated, the switch is closed so that the alarm gets the power. The circuitry is shown as in the below figure. There are two simple steps to install the alarm.

a) Prepare the power supply for the alarm by connecting the power adapter from the camera to the power outlet.
b) Connect the alarm power line to the alarm output terminal located on the back of the DVR as shown below.





NOTICE: Sensor input is RECOGNIZED as LOW when alarm signal is on the same level with GND, and it is recognized as HIGH when alarm signal is Floating or 5V, following the internal circuit. Thus, circuitry can be damaged, when the sensor input goes to a Negative level or voltage higher than 5V.



Full screen or quad screen display

Press QUAD button to display quad screen. Press and hold the button for 3 seconds to enter auto sequence display mode. To adjust the screen sequence auto dwell time between each channel, please go to SYSTEM SETUP into AUTO SEQUENCE SET into MON SEL: DISPLAY
Press FULL/SEPARATE button to display the selected camera image in full screen, i.e. CAM 1, CAM 2, CAM 3 or CAM 4 individually in full screen display.
Press FULL/SEPARATE button and hold for 3 seconds to display 9 split screen. The split screen display live video images monitoring, see if the live video images are in record mode or not, and able to view and control the history playback file. The “PB CH1~PB CH4” in the split screen below displays the playback channels and the “CAM 1~CAM 4” show live video image display. The 9 split screen allows viewing flexibility; ability to live monitor, show recording status and playback video images all at the same time.

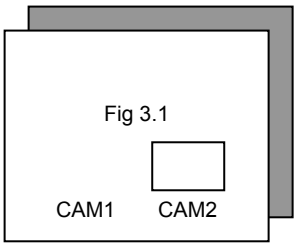
12/11 PB CH1	/2006 12:06:34MON PB CH2	CAM 1
PB CH3	PB CH4	CAM 2
CAM 3	CAM 4	

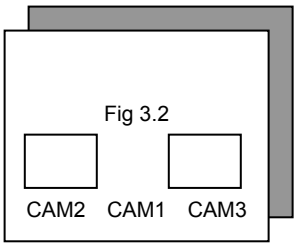
Zoom Mode (Display Enlargement)

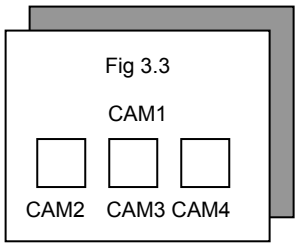
During the live view: Go to full screen mode by pressing the FULL/SEPARATE button, and then press the STOP button. The freeze symbol F will appear on upper right corner of the screen. Then, press the ZOOM button, the zoom symbol Z, will appear on the top right corner of the screen next to F. Now you can use the directional buttons to locate the zoomed position up/down, or left/right. Press ENTER at any time to enlarge the selects location and ENTER again to zoom out.
During playback mode: Go to full screen mode by pressing the FULL/SEPARATE button, then press the STOP button, follow by the zoom button. The symbol Z will appear on top right corner. Now you can use the directional buttons to locate the zoomed position and press ENTER to zoom in and ENTER again to zoom out.

PIP (Picture in picture)

Press PIP to enter picture in picture mode. Figures 3.1 through 3.3 display the output screen when PIP is pressed once, twice and third time .

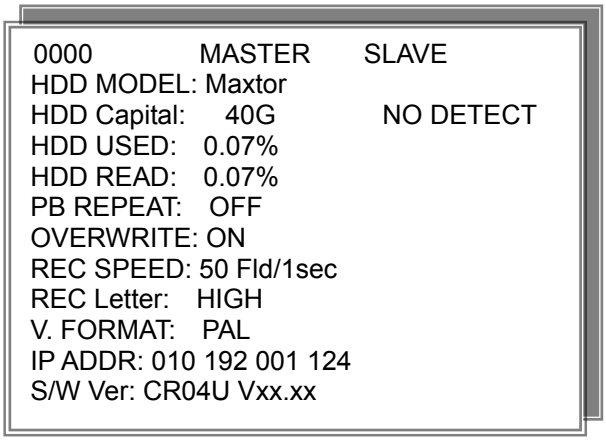






Information

Press INFO to get the following on screen display information; system setting, HD, firmware, etc.



USB Back-Up (To back up data into USB Flash drive)

Note1 : Video backup can only be done during Playback mode.
Sub-Note : This button can be used to reset the DVR to manufacturer default setting. For example: if by default the video mode is NTSC standard and PAL is accidentally selected, the video output will roll vertically, or if password is forgotten. If in such cases, this button can be used to default all setting back to the original manufacture setting. To reset to manufacture default setting; power off the DVR, press and hold the “USB BACKUP” button while tuning on the DVR power switch, continue to hold down on the “USB_BACKUP” button for 5 seconds, after 5 seconds release the “USB_BACKUP” button and then restart the DVR by using the power switch off and on.

a) Step One: Check available space of USB Flash Drive.

Plug a USB flash drive into the USB port on the rear panel of the DVR . Press MENU button and choose FW UPDATE only to see the available space on the USB flash drive for backup. Then press the MENU button to escape from FW UPDATE menu. Please note the USB flash drive recommended use is 2GB which is the maximum capacity the DVR is capable of detecting. Drives that are larger than 2GB capacity can be use but, depending on the capacity size of the flash drive the backup speed will vary during backup.

b) Step Two: Choose a video file section to save

Press PLAY/PAUSE button, and the Search Mode will appear on screen. Please select between REC START /STOP SEARCH, EVENT LIST SEARCH, or TIME/DATA SEARCH, and press ENTER to confirm the selection. During Playback Mode, press USB_BACKUP button to save the desired snapshot or video to the USB flash drive at anytime during playback. There are two methods of backup: the first method is to press the USB BACKUP button once for snapshots picture, and the second method is to press and hold the USB BACKUP button for 3 seconds for video clips backup. During these process an “S” will appear on the screen when attempting to do snapshots backup and an “A" will appear on the screen when attempting to do video clips backup.

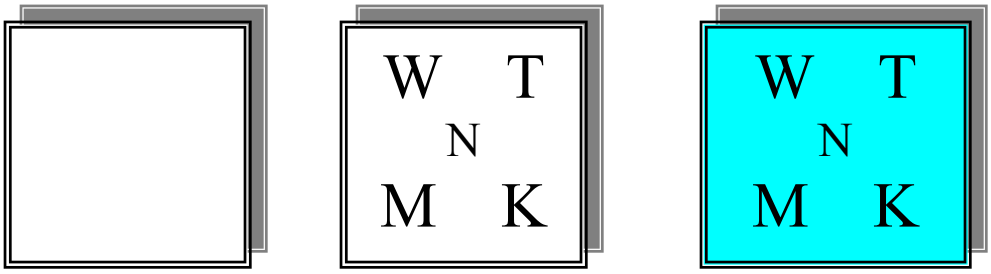
Note 2 : video USB backup can take anywhere from 3 seconds up to 45 seconds before if starts the backup. For faster backup we recommend to use flash drives that are below 2G B in size. The larger flash drive, the slower the backup

Freeze Mode

During the live camera view, press the stop button to freeze the image. The symbol F will appear on the top right hand corner of the screen. The freeze command can be use in both single channel view or quad channel view.

Watermark Mode

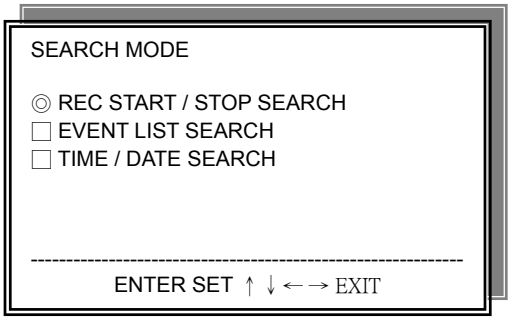
Watermark protection feature: It is to prevent any modification of the recorded data file . If there is modification; the watermark will not look the same. The watermark will automatically be added during the recording stage, whether or not they are visible or invisible mark . There are 3 types of watermarks to choose from as preferred below.
During playback mode, press the UP button once to activate the invisible watermark. Press the UP button twice to activate the visible watermark; the visible watermark symbols will appear on the screen as WTNMK as shown in the middle figure below. Finally by pressing the UP button third time to activate the watermark as shown in last figure below. Most commonly used watermark is visible WTNMK.



Invisible WTNMK Visible WTNMK WTNMK

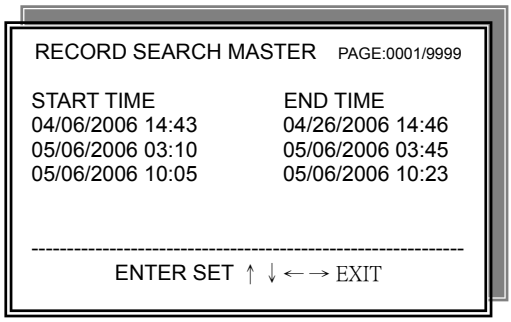
Playback Mode

Press Play/Pause button, and the SEARCH MODE will appear on screen as illustrated below.



Press the UP/DOWN button to browse and select one of the 3 search methods to playback recorded video files.

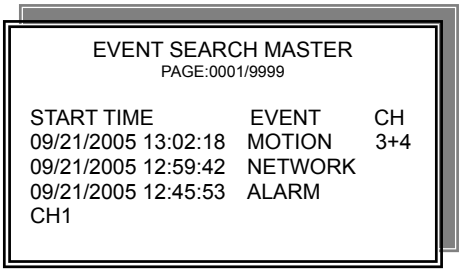
REC START/STOP SEARCH(Search by Start/Stop Time recording):



START TIME: MM / DD / YYYY HH: MM (start of recorded file)
END TIME: MM / DD / YYYY HH: MM (End of recorded file)
The DVR can store up to 10 files to a page and 100 pages maximum. The total files listing up to 1000. The START/STOP listing delete the rectangular box. are arranged in order by time and date.

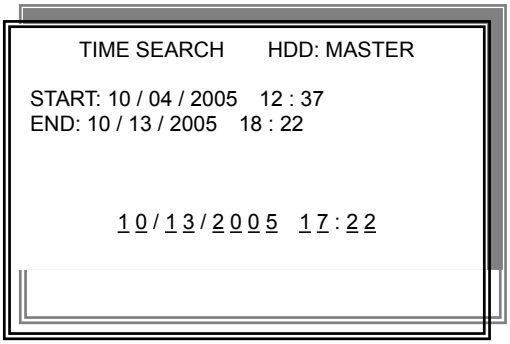
Press the directional button UP/DOWN to select a file and press [ENTER] to confirm the selection and start the playback.

EVENT LIST SEARCH:



Select EVENT LIST SEARCH to search for Alarm event, motion event, schedule event, and network event (recorded over network client software, Netviewer).
EVENT LIST can display up to 10 event files to a page and there are 100 pages which total up to 1000 event lists.
START TIME: MM / DD / YYYY HH: MM: SS (Event start time)
EVENT: includes Alarm / Motion / Schedule / Network.
CH: CH 1, CH 2, CH 3, CH 4 (Event channel occurring channel(s))
Press the UP/DOWN directional buttons to select a file and press ENTER to confirm the selection.

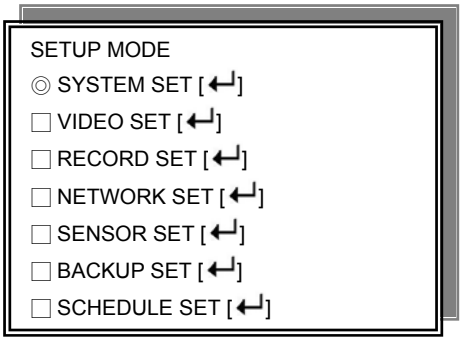
TIME / DATE SEARCH:



Select TIME/DATE SEARCH to search for specific time/date by inputting the MM/YYYY HH: MM into the search, the search engine will start to search for the specified time and date.
START: MM / DD / YYYY HH: MM (**start/earliest date/time that exists in the hard drive**)
END: MM / DD / YYYY HH: MM (**End/last date/time that exist in the hard drive**)
M M / D D / Y Y Y Y H H : M M (this date/time area is adjustable for search). Press the Forward/ Reverse button to select column digits and press UP/DOWN to change the value. Press the ENTER button to start playback.
NOTE: Playback speed can be change with the Forward/Reverse button. The speed can be of x1, x2, x4, x8, x16 times for rewind and x1, x2, x4, x8, x16, x32 times for fast forward.

Basic Operation

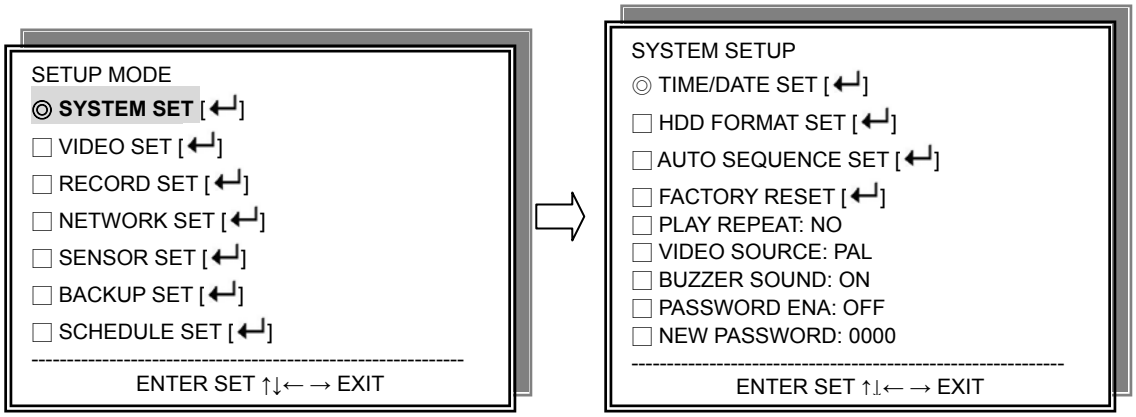
Press the MENU button to enter the SETUP MODE, a variety of menu entities will appear as shown below:



Press the UP/DOWN buttons to highlight selection and press ENTER to confimr selection and the sub-menu will appear. Press the MENU button to return to the previous screen or to exit from the setup mode.

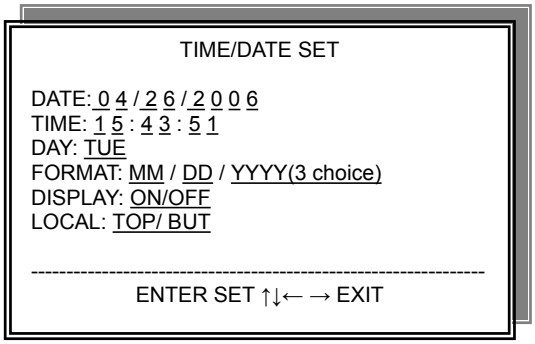
SYSTEM SET

Press the MENU button to enter SETUP MODE. Choose SYSTEM SET and press ENTER to access the sub-menu display as illustrated below.


SETUP MODE
◎ SYSTEM SET [↵]
☐ VIDEO SET [↵]
☐ RECORD SET [↵]
☐ NETWORK SET [↵]
☐ SENSOR SET [↵]
☐ BACKUP SET [↵]
☐ SCHEDULE SET [↵]
ENTER SET ↑↓← → EXIT
SYSTEM SETUP
◎ TIME/DATE SET [↵]
☐ HDD FORMAT SET [↵]
☐ AUTO SEQUENCE SET [↵]
☐ FACTORY RESET [↵]
☐ PLAY REPEAT: NO
☐ VIDEO SOURCE: PAL
☐ BUZZER SOUND: ON
☐ PASSWORD ENA: OFF
☐ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

TIME/DATE SET

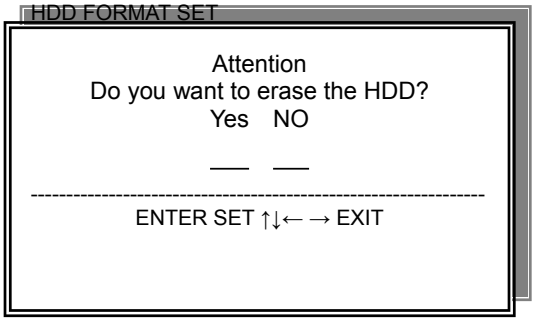
In the SYSTEM SETUP menu, select TIME/DATE SET and press [ENTER]. Press the UP/DOWN buttons to change the value. Press the FORWARD /REVERSE to select number category. Press MENU/ESC to return to SYSTEM setup.



There are three TIME/DATE format display setting to choose from. TIME/DATE display setting can be turn on or off or set to display at the top or at the bottom of the on screen display.

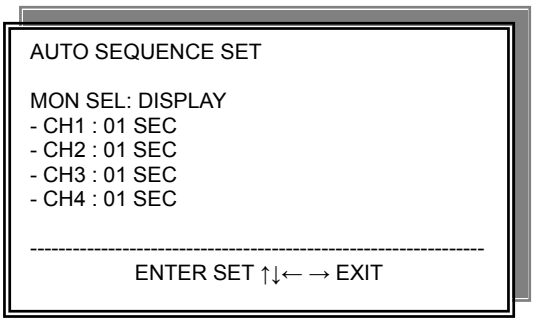
HDD FORMAT SET

In the SYSTEM SETUP menu, select HDD FORMAT SET and press ENTER. The warning screen below will appear. Choose YES or NO by pressing the FORMARD/REUERSE buttons then press ENTER to accept. Press MENU/ESC to return to the SYSTEM SETUP menu .



AUTO SEQUENCE SET

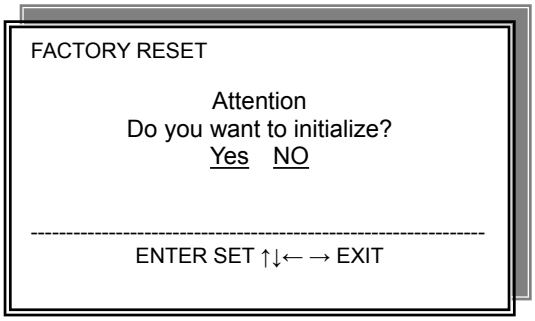
In the SYSTEM SETUP menu, select AUTO SEQUENCE SET and press ENTER. Press the directional buttons UP/DOWN to select the camera channel and the FORWARD/REVERSE buttons to change the sequential dwell time for each channel display. Press MENU/ESC to return to SYSTEM SETUP



MON SEL: CALL is auto sequence dwell time setting used for 2nd or Son-monitor output.

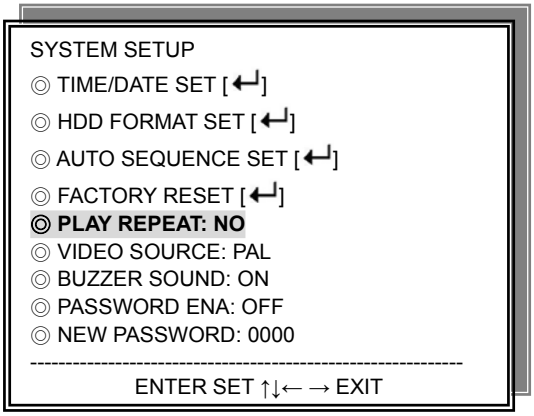
FACTORY RESET

In the SYSTEM SETUP menu, select FACTORY RESET and press ENTER. A warning screen will appear as shown below. Select YES or NO by pressing the FORWARD/REVERSE buttons then press ENTER to confirm selection. Press the MENU/ESC to return to the SYSTEM SETUP menu page.



PLAY REPEAT

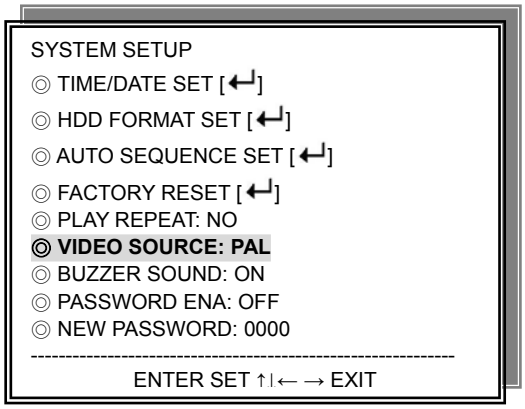
In the SYSTEM SETUP menu, select PLAY REPEAT. Then press the Forward/Reverse buttons to select between YES or NO. Press MENU/ESC to return to the SETUP MODE menu or press UP/DOWN directional buttons to browse to the system setup. Repeat play can be used to play cycle playback file.


SYSTEM SETUP
◎ TIME/DATE SET [↵]
◎ HDD FORMAT SET [↵]
◎ AUTO SEQUENCE SET [↵]
◎ FACTORY RESET [↵]
◎ PLAY REPEAT: NO
◎ VIDEO SOURCE: PAL
◎ BUZZER SOUND: ON
◎ PASSWORD ENA: OFF
◎ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

VIDEO SOURCE

In the SYSTEM SETUP menu, select VIDEO SOURCE. Use the directional buttons FORWARD/ REVERSE toggle between NTSC or PAL video format and press MENU/ESC to return to the SETUP MODE or press the UP/DOWN directional buttons to browse to the next system setup.
Warning: Before switching from NTSC to PAL, please make sure that you are living outside of:

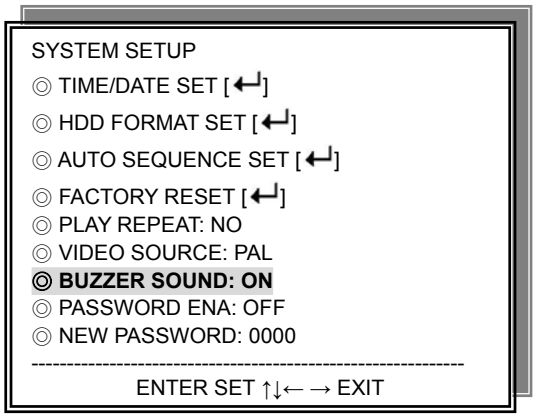
United states of america, alaska, american samoa, antigua, antilles (dutch), aruba, bahamas, barbados, barbuda, belize, bermuda, bolivia(ntsc m n), british virgin islands, burma, canada, caymen islands(pal / ntsc), chile (ntsc-m), columbia, costa rica cuba, curacao, diego garcia, dominica, dominican republic, ecuador, el salvador, galapagos island, greenland(ntsc / pal), grenada, guam, guatemala, guyana (republic), haiti, hawaii, honduras, jamaica, japan, johnston islands, korea south, leeward islands, mariana islands, marshall islands, mexico, micronesia, midway islands, montserrat, myanmar, nicaragua, okinawa, palau, panama, peru, philippines, puerto rico, samoa, st kitts and nevis, st lucia, st vincent, surinam, taiwan, trinidad & tobago, veneauela, vietnam(ntsc / secam(v)), and virgin islands.


SYSTEM SETUP
◎ TIME/DATE SET [↵]
◎ HDD FORMAT SET [↵]
◎ AUTO SEQUENCE SET [↵]
◎ FACTORY RESET [↵]
◎ PLAY REPEAT: NO
◎ VIDEO SOURCE: PAL
◎ BUZZER SOUND: ON
◎ PASSWORD ENA: OFF
◎ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

If the video standard setting is not set up correctly, resetting the DVR is required to default back to NTSC standard. To default: turn off the DVR, press and hold the USB_BACKUP button located in the front panel of the DVR. While pressing and holding down the USB_BACKUP button, turn the power of the DVR on. Kept holding the USB_BACKUP button for 5 seconds and then release it. After the release of the USB_BACKUP button, restart the DVR using the power switch located one the rear of the DVR.

BUZZER SOUND

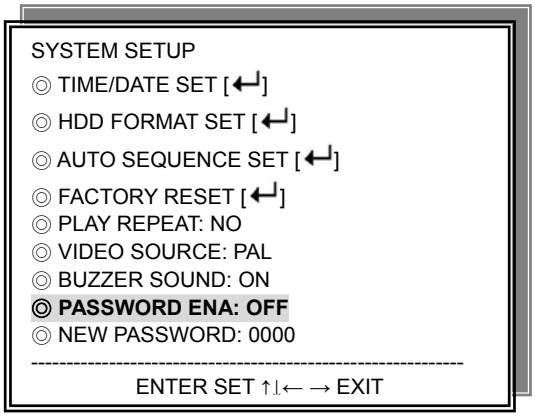
In the SYSTEM SETUP menu, select BUZZER SOUND. Press FORWARD /REVERSE button to change the buzzer sound ON or OFF. Press MENU/ESC to return to SETUP MODE.


SYSTEM SETUP
◎ TIME/DATE SET [↵]
◎ HDD FORMAT SET [↵]
◎ AUTO SEQUENCE SET [↵]
◎ FACTORY RESET [↵]
◎ PLAY REPEAT: NO
◎ VIDEO SOURCE: PAL
◎ BUZZER SOUND: ON
◎ PASSWORD ENA: OFF
◎ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

PASSWORD ENA

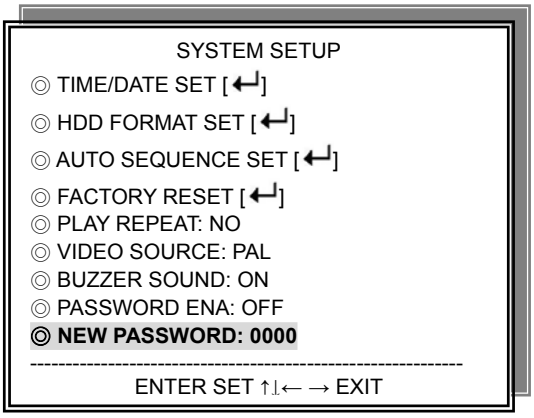
In the SYSTEM SETUP menu, select PASSWORD ENA to enable or disable the DVR password protection. Press the FORWARD/REVERSE button accordingly will turn ON/OFF the password protection feature. When the password it set ON, the DVR will request for password whenever the MENU button are pressed or to stop recording.

The factory default password is 0000. Press MENU/ESC to return to SETUP MODE menu or simply browse up and down by pressing the UP/DOWN arrow keys.


SYSTEM SETUP
◎ TIME/DATE SET [↵]
◎ HDD FORMAT SET [↵]
◎ AUTO SEQUENCE SET [↵]
◎ FACTORY RESET [↵]
◎ PLAY REPEAT: NO
◎ VIDEO SOURCE: PAL
◎ BUZZER SOUND: ON
◎ PASSWORD ENA: OFF
◎ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

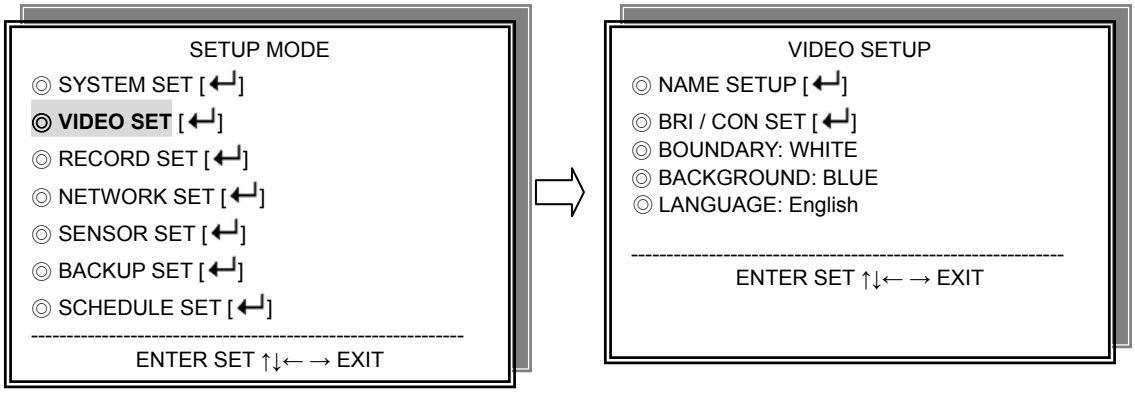
NEW PASSWORD

In the SYSTEM SETUP menu, select NEW PASSWORD. Use the directional buttons FORWARD/ REVERSE to change value of the password. Use the Up/Down buttons to toggle between the first and the fourth digit setting. After changing from the manufacture default password, please remember the newly created password or jot them down and place it in a secure area.


SYSTEM SETUP
◎ TIME/DATE SET [↵]
◎ HDD FORMAT SET [↵]
◎ AUTO SEQUENCE SET [↵]
◎ FACTORY RESET [↵]
◎ PLAY REPEAT: NO
◎ VIDEO SOURCE: PAL
◎ BUZZER SOUND: ON
◎ PASSWORD ENA: OFF
◎ NEW PASSWORD: 0000
ENTER SET ↑↓← → EXIT

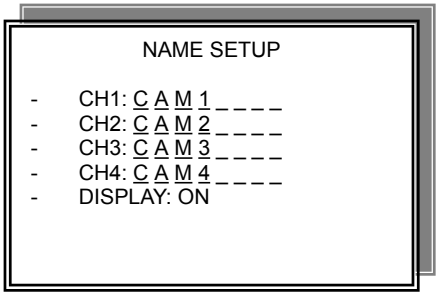
VIDEO SET

Press the MENU button to enter SETUP MODE. Select VIDEO SET from the list, and press ENTER to access the video setting pages as shown below.



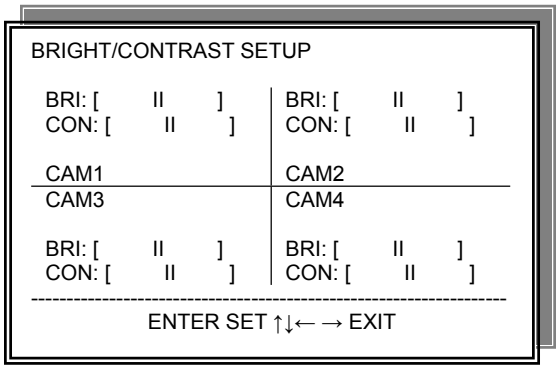
NAME SETUP

In the VIDEO SETUP menu, select NAME SETUP and press ENTER. Press the UP/DOWN buttons to select one of the 4 channels, and then press ENTER to rename. Use the FORWARD/REVERSE buttons to change the alphabet letter charactors. There is a maximum of 8 letters/numbers entries per channel. Press the ENTER/OK after completion or browse down to display by pressing the UP/ DOWN buttons and FORWARD/REVERSE to switch between name display ON/OFF.
When finished, press MENU/ESC to return to VIDEO SETUP menu.



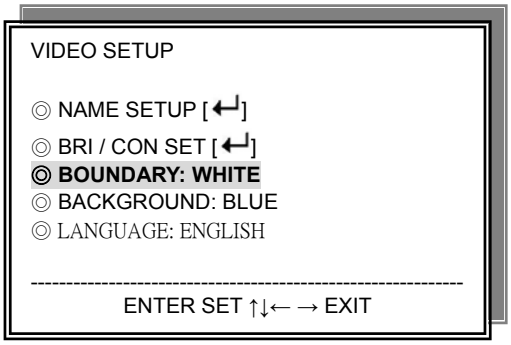
BRI/CON SETUP

In the VIDEO SETUP menu, select BRI/CON SETUP and press ENTER. Press UP/DOWN to select one of the four camera BRI/CON and press FORWARD/REVERSE buttons to adjust the value. Press MENU to return to the VIDEO SETUP menu page. The default value is the middle for both the BRI/CON.



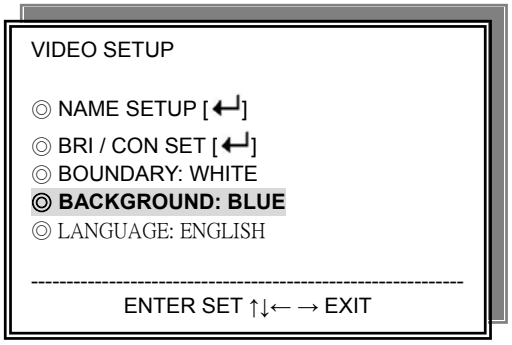
BOUNDARY

In the VIDEO SETUP menu, select BOUNDARY. Use the FORWARD/REVERSE buttons to select between White or Black boundary. Press MENU/ESC to return to the SETUP MODE menu or press the UP/DOWN buttons to browse VIDEO SEPUT. Press the down button to advance to BACKGROUND selection.

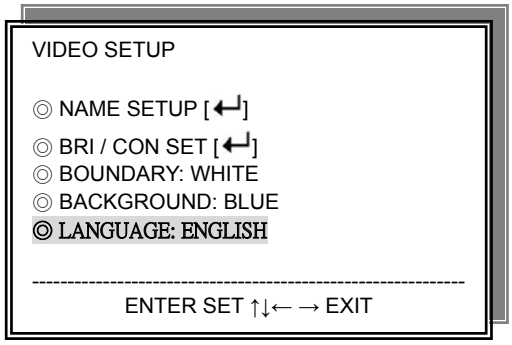


BACKGROUND

In the VIDEO SETUP menu, select BACKGROUND. Use the directional buttons FORWARD/REVERSE to select between black, blue, gray or white background. Press MENU/ESC to return to the SETUP MODE or press the down button to advance the LANGUAGE selection.

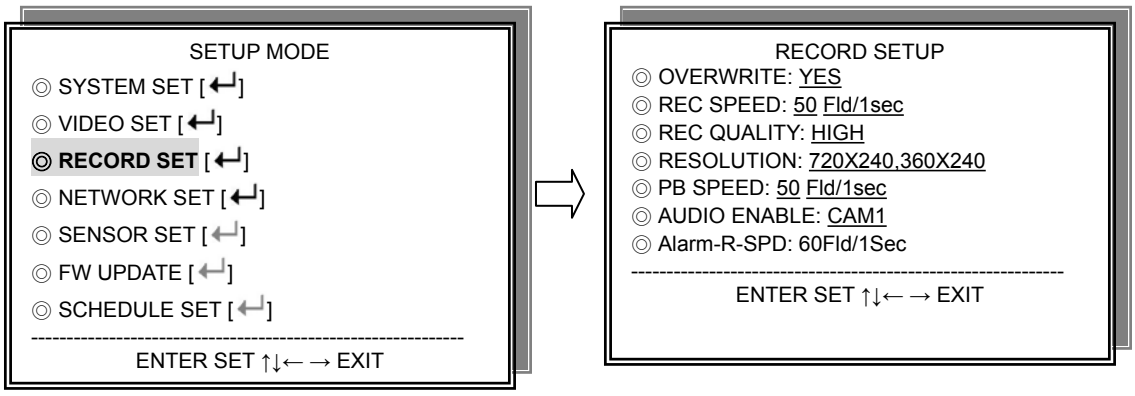


LANGUAGE: the DVR support ENGLISH only.



RECORD SET

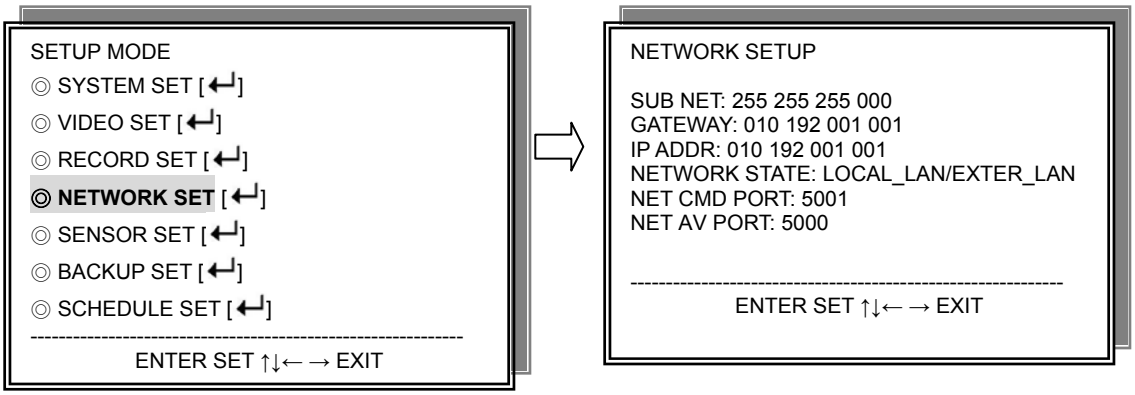
Press the MENU button to enter the SETUP MODE. Browse to select RECORD SET and press ENTER to enter record setup as illustrated below.



Press UP/DOWN to browse and press FORWARD/REVERSE to change the value setting.
OVERWRITE: YES, NO (**YES: once HD is ful system will overwrite the oldest data that existed**.)
REC SPEED: 60, 30, 20, 12 5, 3, 2, 1 Fld/1Sec, 1Fld/2Sec
REC QUALITY: VERY HIGH, HIGH, LOW, VERY LOW
RESOLUTION: 720x240, 360 X 240
PB SPEED: 60 Fld/1Sec, 30, 20, 12, 5, 3, 2, 1 Fld/2Sec, No use
AUDIO ENABLE: CAM1, CAM2, CAM3, CAM4, OFF (only 1 audio channel can be active)
Alarm-R-SPD: 50, 25, 12, 10, 5, 3, 2, 1 Fld/1Sec, 1Fld/2sec (Frame-by-Frame PB set to 1Fld/1Sec)
Press MENU to return to the SETUP MODE menu.

NETWORK SET

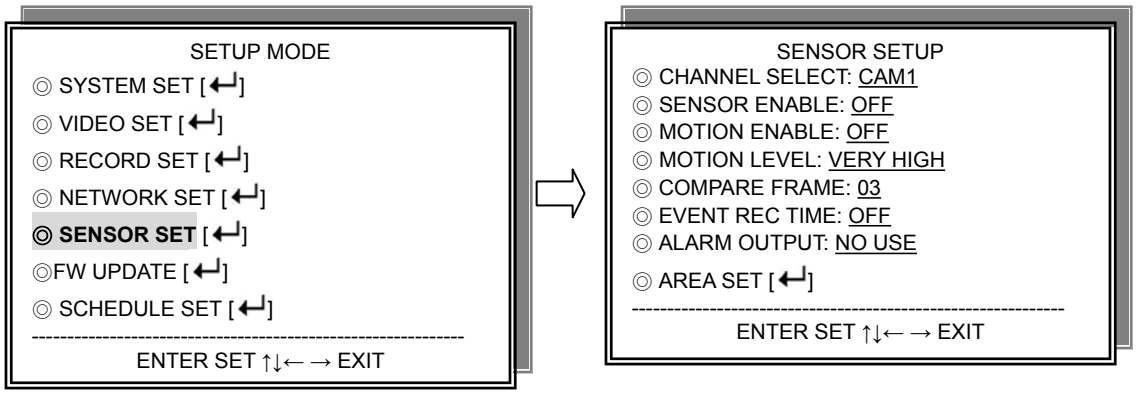
Press the MENU button to enter the SETUP MODE, select NETWORK SET and press ENTER to enter network setup as illustrated below.


SETUP MODE
◎ SYSTEM SET [↵]
◎ VIDEO SET [↵]
◎ RECORD SET [↵]
◎ NETWORK SET [↵]
◎ SENSOR SET [↵]
◎ BACKUP SET [↵]
◎ SCHEDULE SET [↵]
ENTER SET ↑↓← → EXIT
NETWORK SETUP
SUB NET: 255 255 255 000
GATEWAY: 010 192 001 001
IP ADDR: 010 192 001 001
NETWORK STATE: LOCAL_LAN/EXTER_LAN
NET CMD PORT: 5001
NET AV PORT: 5000
ENTER SET ↑↓← → EXIT

The DVR support static IP address only, it will NOTsupport dynamic IP address. With a valid static IP address, please input them into each of the categories: SUB NET, GATEWAY, IP ADDR. If you are unsure, please contact your ISP (Internet Service Provider) for detail as to what type of IP you signed up for when registered. The NET CMD PORT and NET AV PORT are ports used to identity the DVR hardware. These ports are required to be set open from the Router/Firewall in order for both audio and video to transmit through the Router/Firewall to the internet. If you are not sure how to open ports 5000~5001 from the Router/Firewall please consult with your local ISP or router manufacturer as to how to open up these ports. To access the DVR from a remote location the same ports stated above is requried to be open from Router.
NOTE: When installing the client software in the remote computer and there are Router/Firewall, the same ports 5000~5001 has to be opened from within the Router/Firewall in order for the audio/video to breach though the Router/Firewall to the DVR.

SENSOR SET

Press the MENU button to enter the SETUP MODE, select SENSOR SET and press ENTER.


SETUP MODE
◎ SYSTEM SET [↵]
◎ VIDEO SET [↵]
◎ RECORD SET [↵]
◎ NETWORK SET [↵]
◎ SENSOR SET [↵]
◎FW UPDATE [↵]
◎ SCHEDULE SET [↵]
ENTER SET ↑↓← → EXIT
SENSOR SETUP
◎ CHANNEL SELECT: CAM1
◎ SENSOR ENABLE: OFF
◎ MOTION ENABLE: OFF
◎ MOTION LEVEL: VERY HIGH
◎ COMPARE FRAME: 03
◎ EVENT REC TIME: OFF
◎ ALARM OUTPUT: NO USE
◎ AREA SET [↵]
ENTER SET ↑↓← → EXIT

Press the directional buttons UP/DOWN to browse and press FORWARD/ REVERSE buttons to change the value.
CHANNEL SELECT: CAM1, CAM2, CAM3, CAM4 (each CAM set has independent sensor setup)
SENSOR ENABLE: OFF, N.C., N.O.(normally closed and normally opened relay)
MOTION ENABLE: ON, OFF (enable/disable video motion detection)
MOTION LEVEL: VERY HIGH, HIGH, NORMAL, LOW, VERY LOW (the higher the picture qualit the more HD space used)

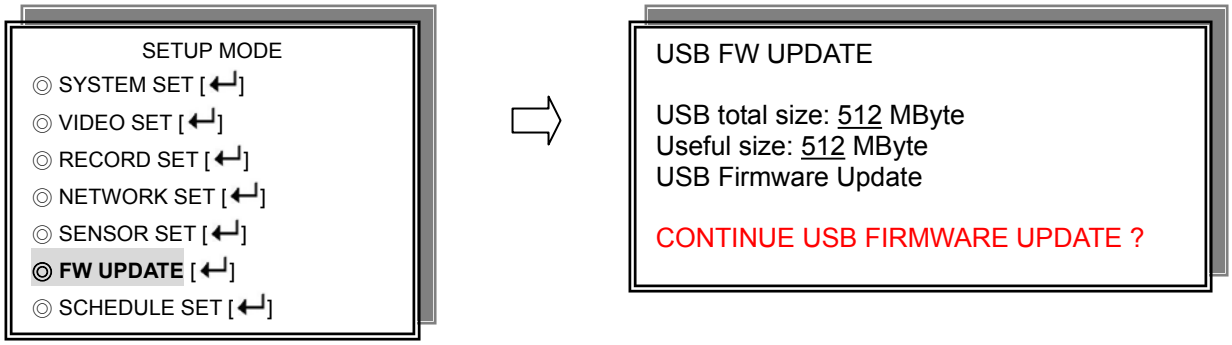
COMPARE FRAME: 1~15(compare the changes of fields' image for alarm trigger. 1=most sensitive 15=least sensitive)
EVENT REC TIME: OFF, 1~99 MINS, CONTINUES
ALARM OUTPUT: NO USE, 1~99 SEC, Always on (used for both sensor output and buzzer sound output)
NOTE: To complete buzzer sound output settings; BUZZER SOUND located in the system Setup needs to be turn ON to activate alarm buzzer sound.
Always on: alarm output set to Always on will enable both the sensor and buzzer output to trigger. At anytime during alarm trigger; press the Menu (by remote control) to disable the buzzer sound and go to ALARM output in the SENSOR SETUP to disable the sensor output.
AREA SET: Press Up/Down to browse and press [ENTER] to select the motion sensative area. There are 48 blocks each are label 'M' stands form motion area. Use the directional buttons to choose the area and press ENTER to confirm the selection or ENTER again again to de-select the fields.

M	M	M	M	M	M	M	M
M	M	M	M	M	M	M	M
M	M	M	M	M	M	M	M
M	M	M	M	M	M	M	M
M	M	M	M	M	M	M	M
M	M	M	M	M	M	M	M

NOTE: when "M" is yellow, it means that the blocks are selected or active areas. The "M" is white, when the areas are de-selected or not active.
Press MENU/ESC to return to the SENSOR SETUP MODE.

Firmware Update

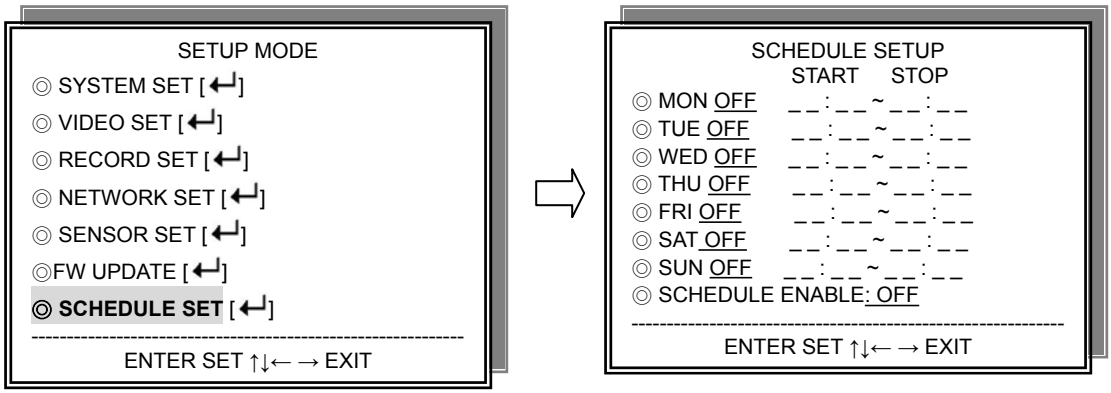
Press the MENU button to enter the SETUP MODE, select FW UPDATE and press ENTER. The "CONTINUE USB FIRMWARE UPDATE?" will appear in red color and the USB total size and useful size will be calculated from the flash drive. Press ENTER again to continue with the firmware update. After the Enter is pressed, wait for approximately 20~30 seconds before the "updating FW %" start in yellow highlights. Once the update reached 100%, the FW is successfully updated; restart the DVR.



Note: Only update firmware upon manufacturer's request.

SCHEDULE SET

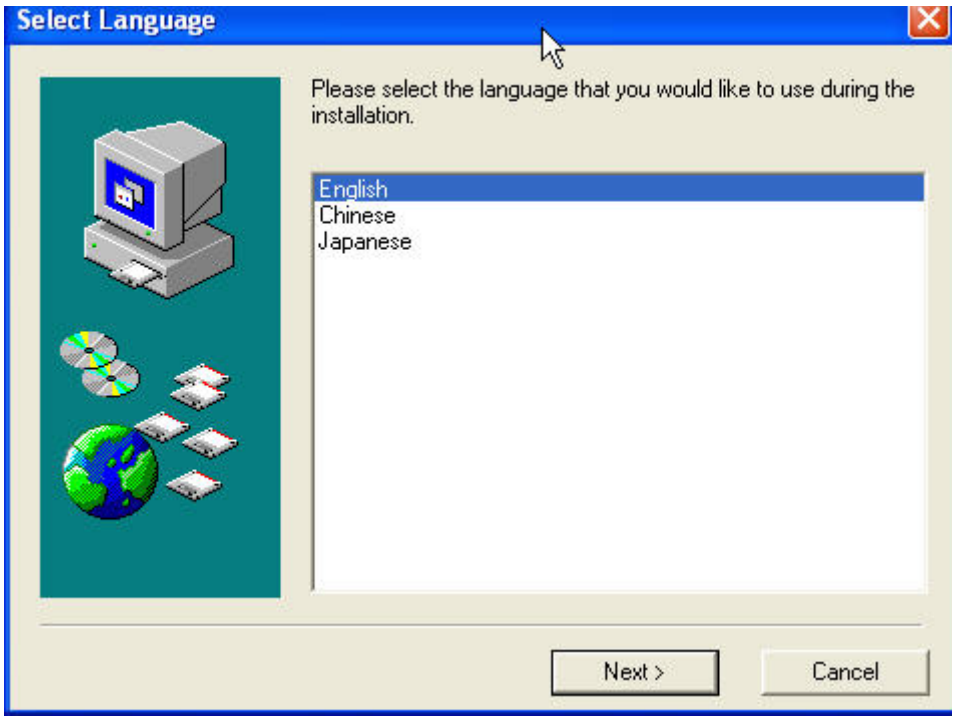
Press MENU button to enter the SETUP MODE, select SCHEDULE SET and press ENTER. Press UP/DOWN to browse and press ENTER to high light selection and then the UP/DOWN buttons to turn ON/OFF the schedule day(s). Use the FORWARD/REVERSE buttons to browse within the day setting and use the UP/DOWN to change the start-stop schedule time value. Finally press ENTER to save and proceed to the next day.



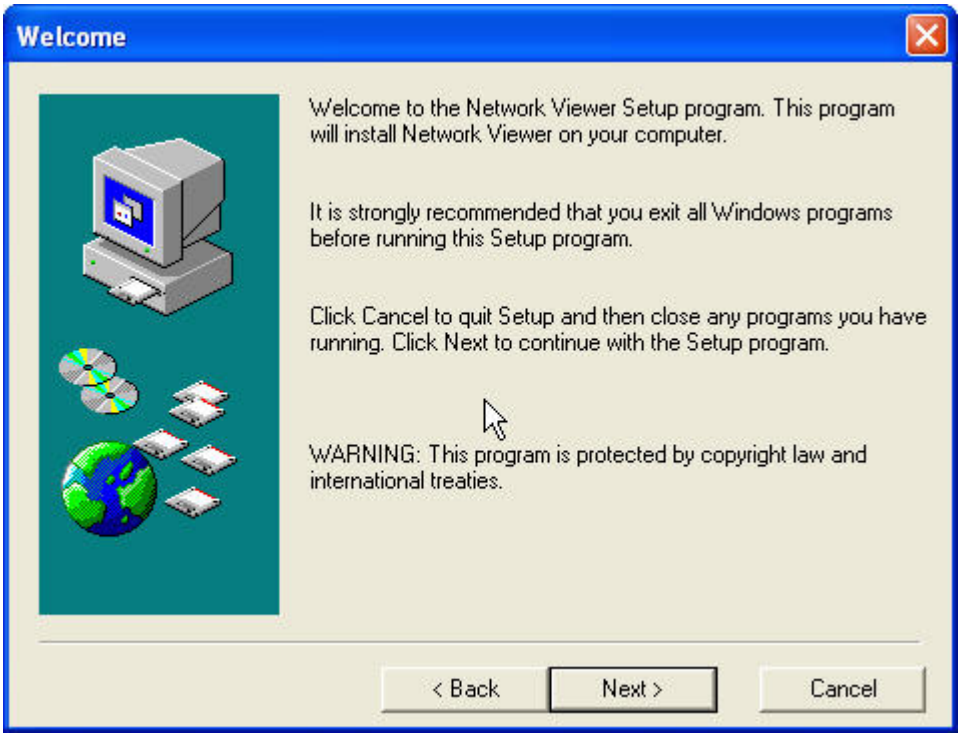
To activate the scheduled recording; browse down to the SCHEDULE ENABLE and turn it to ON, then press the Menu button or ESC button to exit out of the SCHEDULE SETUP menu.
Schedule recording: if schedule time is set within the DVR actual time interval, the DVR will show *SCHEDULE MODE* but it will not start to record until approax.45 seconds later and then the stop time end the DVR will stop to record according to the schedule time set. For example: if schedule start to record at 11:30 and stop to record at 11:35, the DVR will start the scheduled record time of exactly 11:30 and will stop record at 11:35:59.
NOTE: if the DVR actual time is before the start scheduled time, the DVR need approax.45 seconds to start to record. When schedule record is in use or in active mode, manual record and alarm/motion record will NOT be active or cannot be used, to turn off *Schedule Mode *, go to SCHEDULE SET from the SETUP MODE.

To Install Network Netviewer Software:

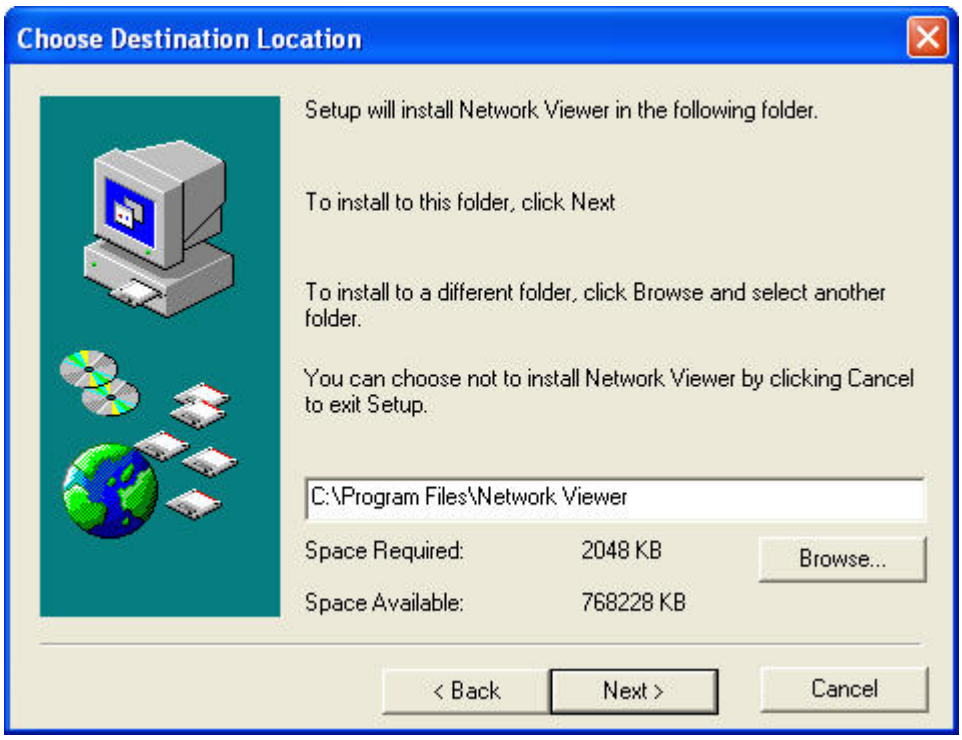
Insert Netviewer CD into the CD-ROM tray, an install shield wizard will appear as shown below. If the install wizard fail to appear, please bowse the CD contents and double click on “setup.exe” file to exceute and run setup. Select a desire language, and then click “Next” to proceed.



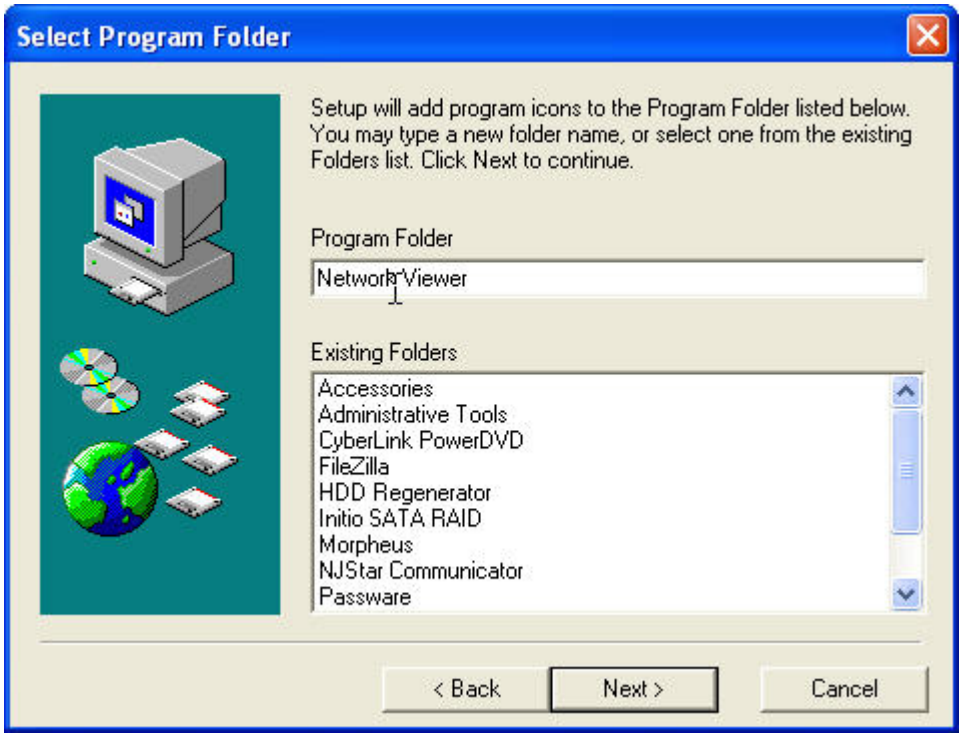
Press “Next” to continue the installation.


Welcome
Welcome to the Network Viewer Setup program. This program will install Network Viewer on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

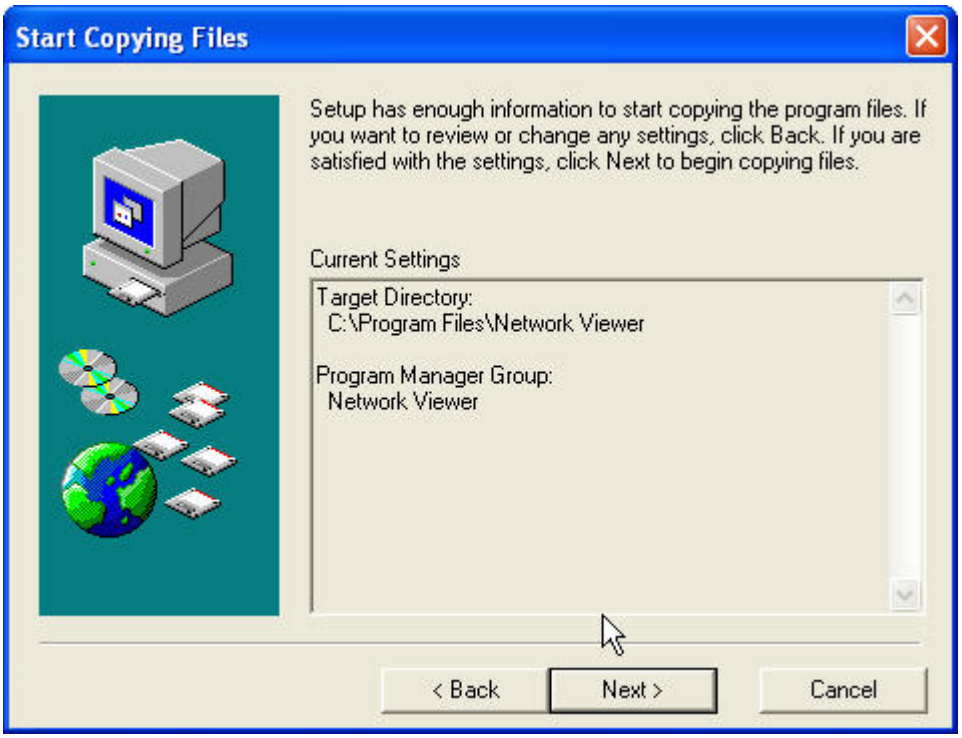
To install a different folder, click Browse and select another folder. Then click “Next” to continue installation.


Choose Destination Location
Setup will install Network Viewer in the following folder.
To install to this folder, click Next
To install to a different folder, click Browse and select another folder.
You can choose not to install Network Viewer by clicking Cancel to exit Setup.
C:\Program Files\Network Viewer
Space Required: 2048 KB
Space Available: 768228 KB
Browse...
< Back
Next >
Cancel

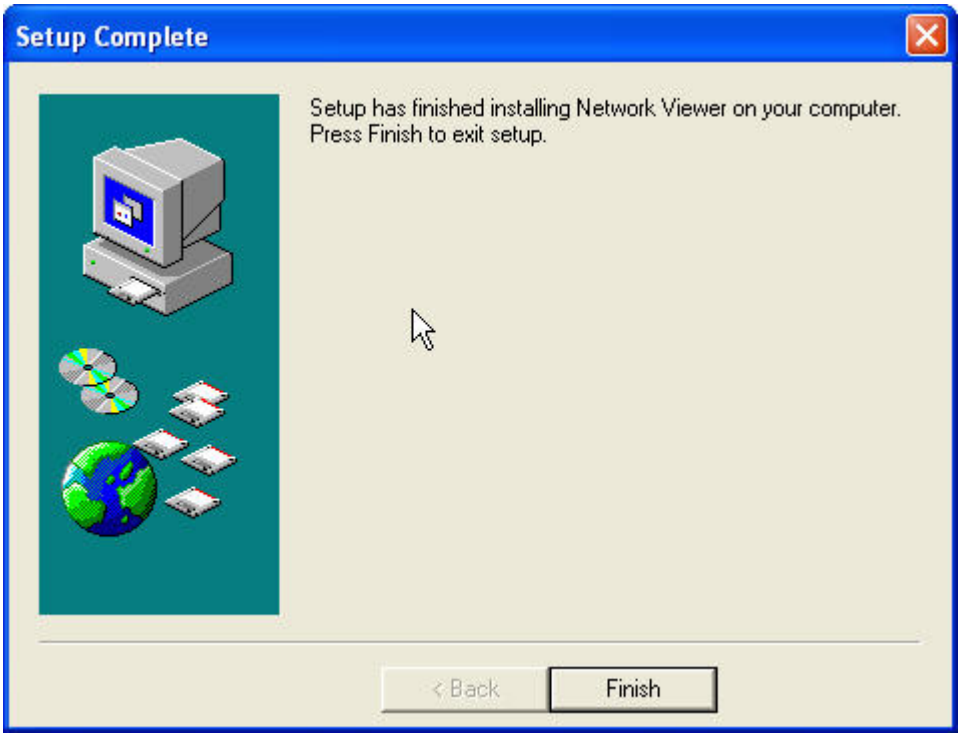
Setup will add program icons to the program folder listed below. Click “Next” to continue installation.



Click “Next” to install NetViewer software.


Start Copying Files
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.
Current Settings
Target Directory:
C:\Program Files\Network Viewer
Program Manager Group:
Network Viewer
< Back
Next >
Cancel

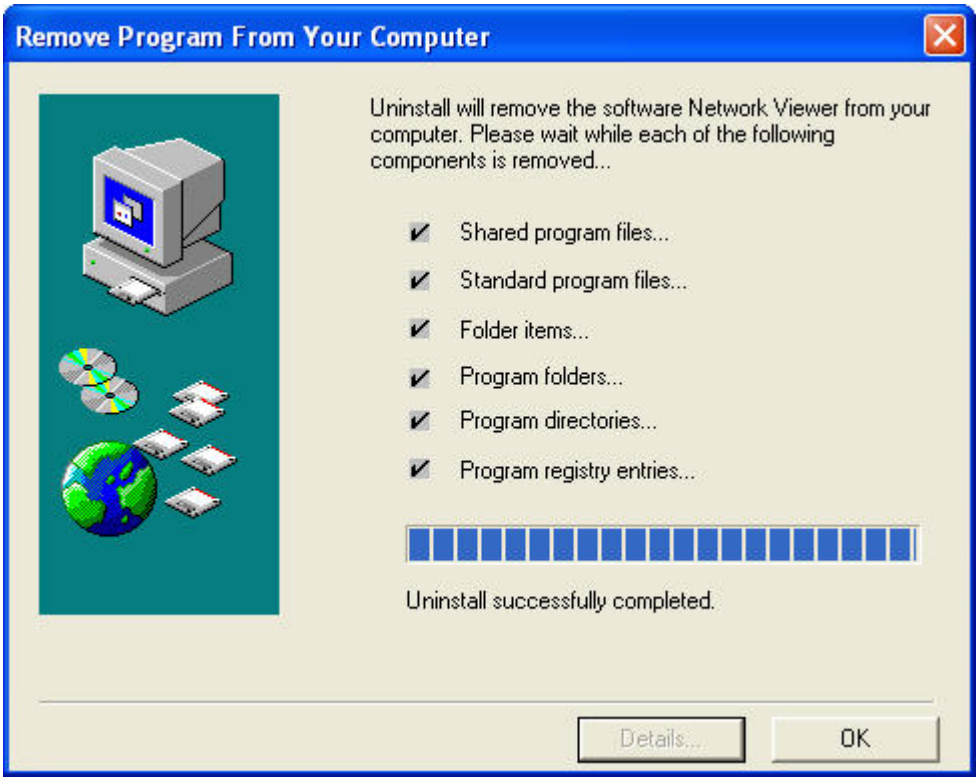
Setup complete, Click “Finish”.



To Uninstall Netviewer:

Go to start >programs/all programs> network viewer >uninstall Network Viewer or go to the system control panel>Add or Remove programs to remove Network Viewer. The following windows will appear:

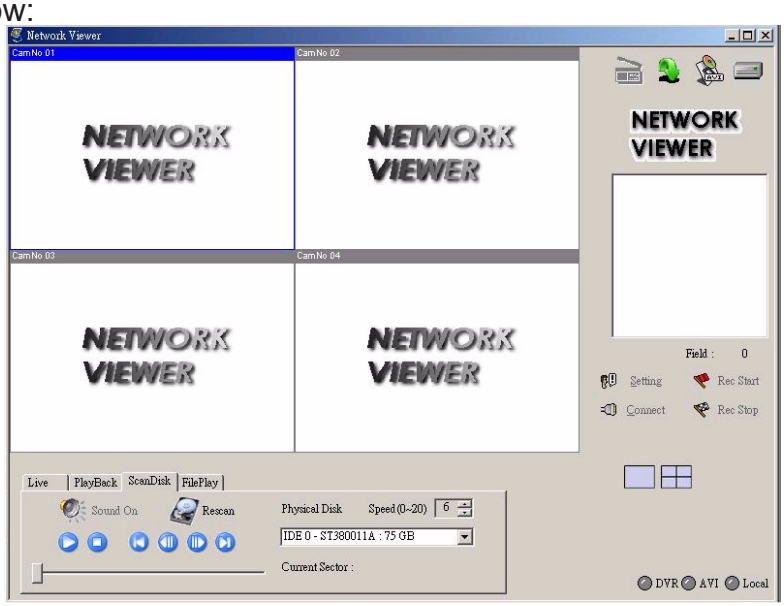
Click “Yes ” to proceed.


Remove Program From Your Computer
Uninstall will remove the software Network Viewer from your computer. Please wait while each of the following components is removed...
Shared program files...
Standard program files...
Folder items...
Program folders...
Program directories...
Program registry entries...
Uninstall successfully completed.
Details...
OK

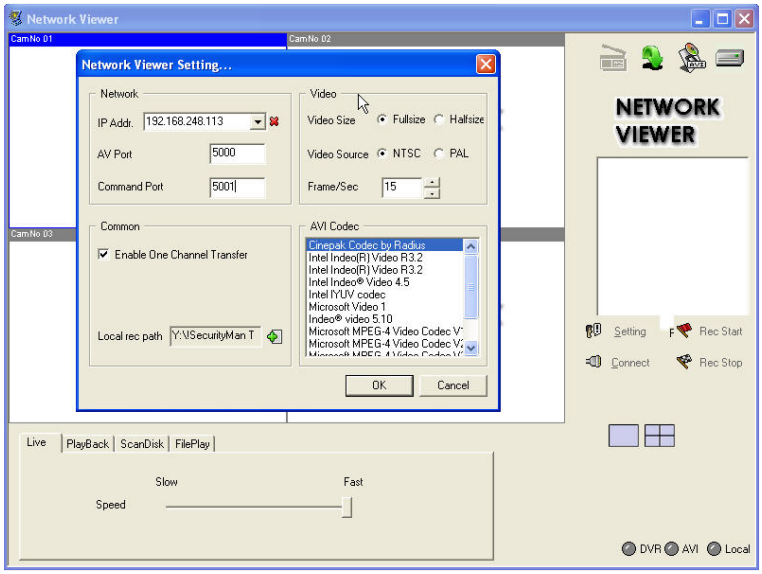
Click “OK ” to complete uninstallation.

How to Use Network Viewer client software:

To execute the Netviewer software go to start >all programs >Network Viewer > NetViewer4ch or double click on Netviewer4CH shortcut icon located on the desktop and a Network Viewer window will appear as shown below:

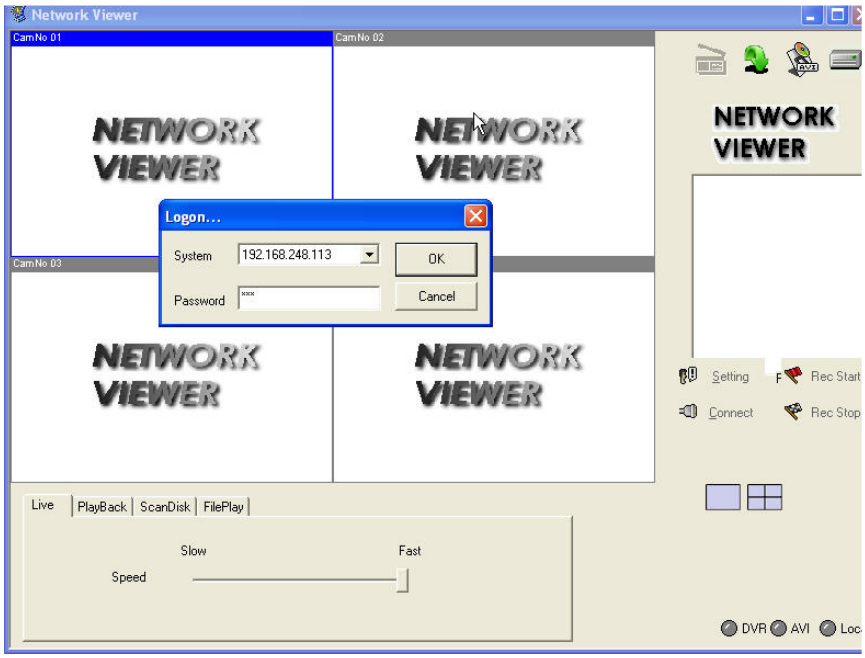


Click the Setting icon on the Netviewer main screen, and the setting display box will appear. Input an IP address assigned to the local DVR. Double check the AV Port and the Command Port to match the local DVR's port settings. The video size defaults to half size which has a resolution of 320x240, for 720x240 select full size options.

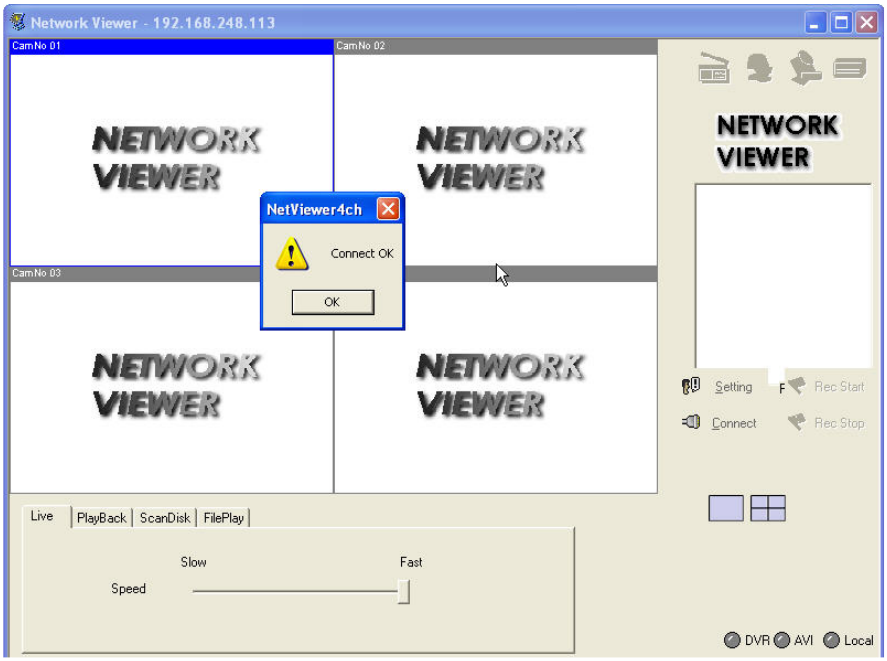


Video Source: Please refer to country NTSC listing before changing.
Frame/Sec: To change the frame rate per second when connecter is establish. Enable One Channel Transfer is recommended to transfer single image for better bandwidth control.
Local Rec. Path is to change the recording location to other hard drive or to other network drive.
AV code: this is auto- selected by the Net Viewer software, please do not change codec setting.
"OK" to confirm and exit.

Click the Connect Connect button, and the Logon dialog box will appear. The DVR IP address will appear in the System field or click down arrow for options. Next input the DVR Password and click “OK” to connect.



When successfully connected click OK.

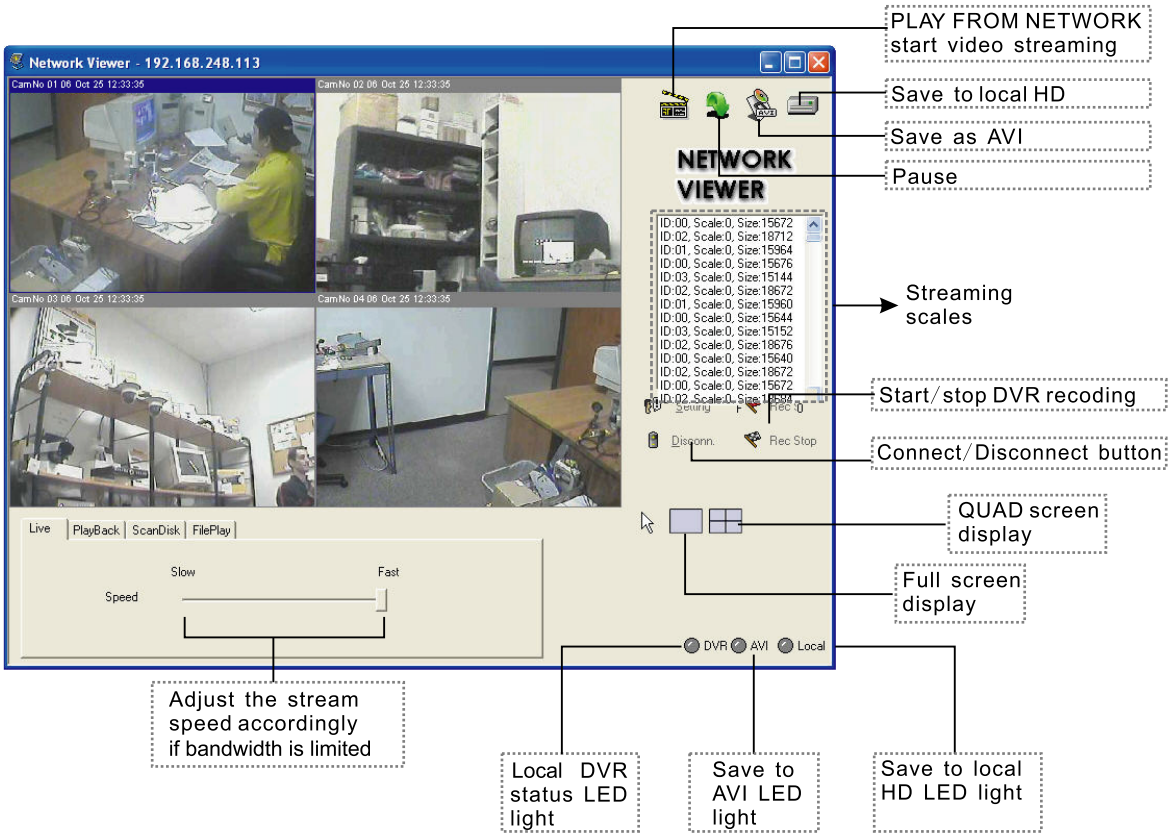


The live video display should start to stream. In any case if the video is not streaming simply click on the “PLAY FROM NETWORK” icon located in the upper right hand corner to start live view streaming as illustrated below. Press the Disconn. disconnect button at any time to stop the live video streaming.

LIVE VIEW

Click on the Rec Start button to start recording on the local DVR from Network Viewer software and the red LED light will light up (lower-Right hand corner). Click on the Rec Stop button to stop the DVR recording and the red DVR LED light will gray out.

Note: If the local DVR is initially in record mode, then using the Netviewer to remotely connect to the DVR, the Rec Stop button will not be active or unusable unless the Rec Start. is initiated first then the Rec Stop can be used to stop the local DVR recording remotely. The initial record mode from the local DVR has the priority over Netviewer software.

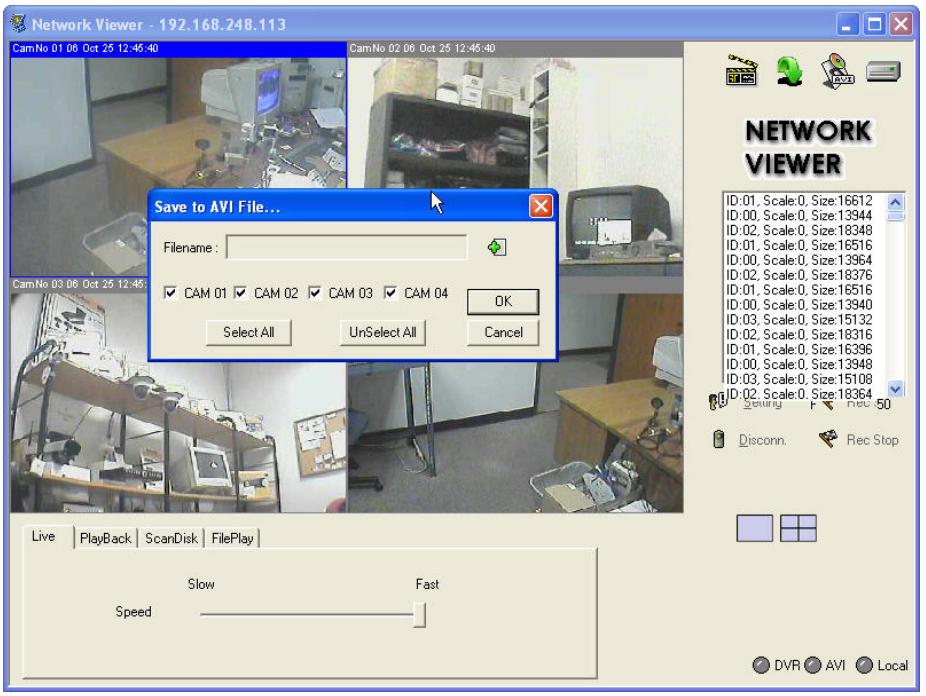


To save video file as AVI format: Click on the “Save As AVI…” button located in the upper-right hand corner of Network Viewer software, a window will appear as illustrated below.

In the save to AVI window, select a save to location and give it a file name. Next select any combination of channels ranging from 1-4 to save and click OK to proceed. A blue LED located in the Lower-Right hand corner will appear. To stop AVI recording simply press on the “Save As AVI…” again. Please note, AVI playbacks require window media and the playback speed will be 3 to 4 times faster than the actual speed of the original recording. The Netviewer software cannot be used to playback AVI files.

To save video streaming to local hard drive: Click on the "Save Video Stream to PC's HDD" to start to save the video to local hard drive. A green LED located at the Lower-Right hand corner will appear. To stop saving to local hard drive, simply press the “Save Video Stream to PC’s HDD” and the green light will disappear and grayed out from the Lower-Right hand corner of Network Viewer.

Note: The “Save Video Stream to PC’s HDD” saves video format as .dvr which can only be playback using the “File Play” tab from the Netviewer software. The .dvr video saved to location setting can be change in the Netviewer setting under the “Local Rec Path”

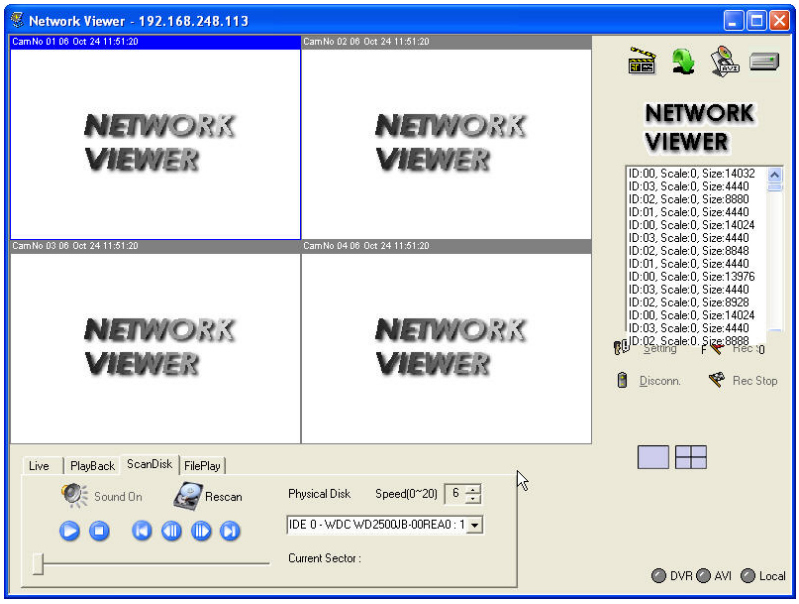


In the save to AVI window, select a save to location and give it a file name. Next select any combination of channels ranging from 1-4 to save and click OK to proceed. A blue LED located in the Lower-Right hand corner will appear. To stop AVI recording simply press on the “Save As AVI…” again. Please note, AVI playbacks require window media and the playback speed will be 3 to 4 times faster than the actual speed of the original recording. The Netviewer software cannot be used to playback AVI files.

To save video streaming to local hard drive: Click on the "Save Video Stream to PC's HDD" to start to save the video to local hard drive. A green LED located at the Lower-Right hand corner will appear. To stop saving to local hard drive, simply press the “Save Video Stream to PC’s HDD” and the green light will disappear and grayed out from the Lower-Right hand corner of Network Viewer.

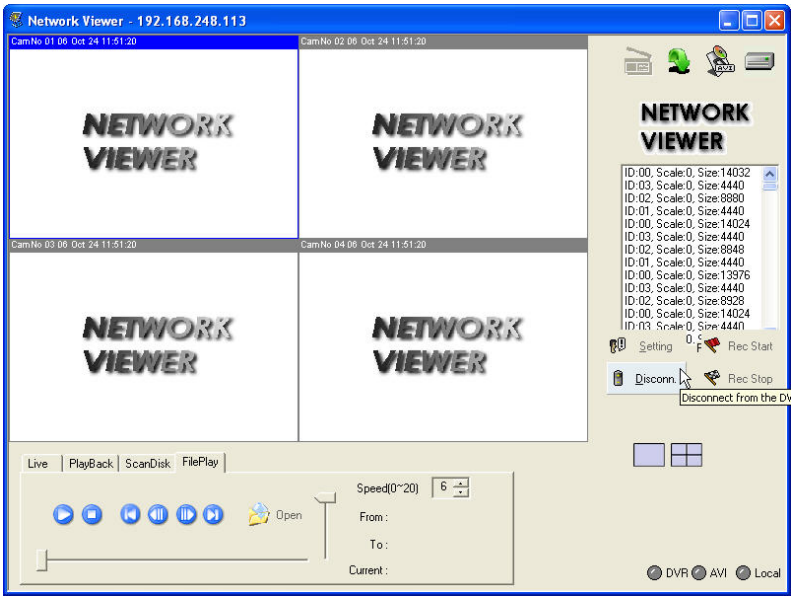
Note: The “Save Video Stream to PC’s HDD” saves video format as .dvr which can only be playback using the “File Play” tab from the Netviewer software. The .dvr video saved to location setting can be change in the Netviewer setting under the “Local Rec Path”

SCANDISK



Scandisk tab is used when the hard drive is removed from the inside of the DVR and connecting it directly to the IDE bus of the computer or via 3rd party External enclosure. This procedure is affective if there is something wrong with the DVR's ability to playback important recorded data. Please note that this is not one of the remote features used to control the DVR remotely.

FILEPLAY



FilePlay tab is used to retrieve saved .dvr files from the local hard drive to playback. Click on the ”Open” button to browse for .dvr files and simply click on the play button in blue and white to start playback. Use pause, stop, REW, FF and adjust the playback speed accordingly.

Important Message:

The higher the video quality, the clearer the picture. On the contrary, the lower the video quality setting can provide longer the record time. The record time varies depending on the field size and picture quality. **The following record time tables can be used as a reference. The record time capacity can vary depending on the image complexity, color, black & white, brightness, contrast, image movement and background video noise. The actual record time can be more or less than the given reference tables.** On average, it takes an additional 8K per second more with audio recording.

Recording time calculation formula:
A: Hard disk capacity,
B: Video Quality: Low (8Kb/frame), Normal (10Kb/frame), High (12Kb/frame)
C: Recording Frame Rate: 30fps, 15fps, 10fps, 7fps, 5fps, 4fps etc.

A GB x 1,000,000 k/GB)/ (BxC) k per sec. = D sec (Recording Time)D sec. / 60 / 60 / 24 = H days (Recording Time)
For example, at NTSC 720 *240, Quality: Very High: 28Kb/s
Max. 30 fps or 60 field/sec on a 200GB HDD.
200GB x 1,000,000 k/GB)/ (28k/f x 60field/s) = 119047.62 Seconds.
119047.62/3600 = 33.07 Hours of record time for a 200GB hard drive

Recording size per field without Audio

Recording Size per Field **Unit : KB**

Resolution/Quality	Very High	High	Low	Very Low
PAL				
720*240	33	24	19	18
360*240	16	12	10	9
NTSC	Very High	High	Low	Very Low
720*240	28	20	16	15
360*240	14	11	9	8

Recording Time Table:

Based on 200GB HDD at PAL

Unit : Hours

Resolution \ Field/Sec		100	50	25	12	10	5	3	2	1	1/2
720*240	Very High		33.7	67.3	140.3	168.4	336.7	561.2	841.8	1683.5	3367.0
	High		46.3	92.6	192.9	231.5	463.0	771.6	1157.4	2314.8	4629.6
	Low		58.5	117.0	243.7	292.4	584.8	974.7	1462.0	2924.0	5848.0
	Very Low		61.7	123.5	257.2	308.6	617.3	1028.8	1543.2	3086.4	6172.8
360*240	Very High	34.7									
	High	46.3									
	Low	55.6									
	Very Low	61.7									

Recording Time Table

Based on 200GB HDD at NTSC

Unit : Hours

Resolution \ Field/Sec		120	60	30	20	12	5	3	2	1	1/2
720*240	Very High		33.1	66.1	99.2	165.3	396.8	661.4	992.1	1984.1	3968.3
	High		46.3	92.6	138.9	231.5	555.6	925.9	1388.9	2777.8	5555.6
	Low		57.9	115.7	173.6	289.4	694.4	1157.4	1736.1	3472.2	6944.4
	Very Low		61.7	123.5	185.2	308.6	740.7	1234.6	1851.9	3703.7	7407.4
360*240	Very High	33.1									
	High	42.1									
	Low	51.4									
	Very Low	57.9									

Recording Time Table:

Based on 320GB HDD at PAL

Unit : Hours

Resolution \ Field/Sec		100	50	25	12	10	5	3	2	1	1/2
720*240	Very High		53.9	107.7	224.5	269.4	538.7	897.9	1346.8	2693.6	5387.2
	High		74.1	148.1	308.6	370.4	740.7	1234.6	1851.9	3703.7	7407.4
	Low		93.6	187.1	389.9	467.8	935.7	1559.5	2339.2	4678.4	9356.7
	Very Low		98.8	197.5	411.5	493.8	987.7	1646.1	2469.1	4938.3	9876.5
360*240	Very High	55.6									
	High	74.1									
	Low	88.9									
	Very Low	98.8									

Recording Time Table

Based on 320GB HDD at NTSC

Unit : Hours

Resolution \ Field/Sec		120	60	30	20	12	5	3	2	1	1/2
720*240	Very High		52.9	105.8	158.7	264.6	634.9	1058.2	1587.3	3174.6	6349.2
	High		74.1	148.1	222.2	370.4	888.9	1481.5	2222.2	4444.4	8888.9
	Low		92.6	185.2	277.8	463.0	1111.1	1851.9	2777.8	5555.6	11111.1
	Very Low		98.8	197.5	296.3	493.8	1185.2	1975.3	2963.0	5925.9	11851.9
360*240	Very High	52.9									
	High	67.3									
	Low	82.3									
	Very Low	92.6									

Recording Time Table:

Based on 500GB HDD at PAL

Unit : Hours

Resolution \ Field/Sec		100	50	25	12	10	5	3	2	1	1/2
720*240	Very High		84.2	168.4	350.7	420.9	841.8	1402.9	2104.4	4208.8	8417.5
	High		115.7	231.5	482.3	578.7	1157.4	1929.0	2893.5	5787.0	11574.1
	Low		146.2	292.4	609.2	731.0	1462.0	2436.6	3655.0	7309.9	14619.9
	Very Low		154.3	308.6	643.0	771.6	1543.2	2572.0	3858.0	7716.0	15432.1
360*240	Very High	86.8									
	High	115.7									
	Low	138.9									
	Very Low	154.3									

Recording Time Table

Based on 500GB HDD at NTSC

Unit : Hours

Resolution \ Field/Sec		120	60	30	20	12	5	3	2	1	1/2
720*240	Very High		82.7	165.3	248.0	413.4	992.1	1653.4	2480.2	4960.3	9920.6
	High		115.7	231.5	347.2	578.7	1388.9	2314.8	3472.2	6944.4	13888.9
	Low		144.7	289.4	434.0	723.4	1736.1	2893.5	4340.3	8680.6	17361.1
	Very Low		154.3	308.6	463.0	771.6	1851.9	3086.4	4629.6	9259.3	18518.5
360*240	Very High	82.7									
	High	105.2									
	Low	128.6									
	Very Low	144.7									

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